MINIMUM IMPACT TACTICS GUIDELINES

The change from FIRE CONTROL to FIRE MANAGEMENT has added a new perspective to the role of fire manager and the firefighter. The objective of putting the fire "dead-out" by a certain time has been replaced by the need to make unique decisions with each fire start, to consider the land and resource objectives, and to decide the appropriate management response and tactics which result in minimum costs and resource damage.

Traditional thinking, "the only safe fire is a fire without a trace of smoke" is no longer valid. Fire Management now means managing fire "with time" as opposed to "against time." This change in thinking and way of doing business involves not just the firefighter, but all levels of management as well.

NPS fire management requires the fire manager and firefighter to select management tactics commensurate with the fire's potential or existing behavior, yet leaves minimal environmental impact.

The intent of this guide is to serve as a checklist for the Incident Command and Planning Section Chief, Operations Section Chief, Logistics Section Chief, Division/Group Supervisors, Strike Team/Task Force Leaders, Single Resource Bosses, and firefighters. Accomplishments of minimum impact fire management techniques originates with instructions that are understandable, stated in measurable terms, and communicated both verbally and in writing. Evaluation of these tactics both during and after implementation will further the understanding and achievement of good land stewardship ethics during fire management activities.

AGENCY ADMINISTRATOR/INCIDENT MANAGEMENT TEAM/FIREFIGHTER CONSIDERATIONS FOR MINIMUM IMPACT MANAGEMENT

The following guidelines are for park superintendents, incident management teams and firefighters to consider. Some or all of these items may apply, depending upon the situation.

Consider:

Command and General Staff.

1. Evaluate each and every suppression tactic during planning and strategy sessions to see that they meet superintendent's objectives and minimum impact management guidelines.
2. Include agency resource advisor and/or local representative in above session.
3. Discuss minimum impact management techniques with overhead during overhead briefings, to gain full understanding of tactics.
4. Ensure minimum impact management techniques are implemented during line construction as well as other resource disturbing activities.

Planning Section.

1. Use resource advisor to evaluate that management tactics are commensurate with land/resource objectives, and incident objectives.

2. Use an assessment team to get a different perspective of the situation.
3. Use additional consultation from "publics" or someone outside the agency, especially if the fire has been or is expected to be burning for an extended period of time.
4. Adjust line production rates to reflect the minimum impact management tactics.
5. Use brush blade for line building--when dozer line is determined necessary tactics.
6. Leave some trees randomly in fireline.
7. Ensure that instructions for minimum impact management techniques are listed in the incident action plan.
8. Detail objectives for extent of mop-up necessary--for instance: "_____ distance within perimeter boundary."
9. If helicopters are involved, use long line remote hook in lieu of helispots to deliver/retrieve gear.
10. Anticipate fire behavior and ensure all instructions can be implemented safely.
11. Consider coyote camps versus fixed campsite in sensitive areas.
12. In extremely sensitive area, consider use of portable facilities (heat/cook units, latrines).

Operations Section.

1. Emphasize minimum impact management techniques during each operational period briefing.
2. Explain expectations for instructions listed in incident action plan.
3. Consider showing minimum impact management slide-tape program or video to the crews upon arrival at airport/incident.
4. Consider judicious use of helicopters--consider long lining instead of helispot construction.
5. Use natural openings so far as practical.
6. Consider use of helibucket and water/foam before call for air tanker/retardant.
7. Monitor suppression tactics/conditions.
8. Distribute field guide to appropriate supervisory operations personnel.

Logistics Section.

Ensure actions performed around areas other than Incident Base, i.e. dump sites, camps, staging areas, helibases, etc., result in minimum impact upon the environment.

Division/Group Supervisor and Strike Team/Task Force Leader.

1. Ensure crew superintendents and single resource bosses understand what is expected.
2. Discuss minimum impact tactics with crew.
3. Ensure dozer and falling bosses understand what is expected.
4. If helicopters are involved, use natural openings as much as possible; minimize cutting only to allow safe operations.
5. Avoid construction of landing areas in high visitor use areas.
6. Monitor suppression tactics/conditions.

Crew Superintendents.

1. Ensure/Monitor results expected.
2. Discuss minimum impact management techniques with crew.
3. Provide feedback on implementation of tactics--were they successful in halting fire spread; what revisions are necessary?

4. Look for opportunities to further minimize impact to land and resources during the suppression and mop-up phase

IMPLEMENTATION GUIDELINES

Minimum impact management is an increased emphasis to do the job of suppressing a wildland fire while maintaining a high standard of caring for the land. Actual fire conditions and your good judgement will dictate the actions you take. Consider what is necessary to halt fire spread and ensure it is contained within the fireline or designated perimeter boundary.

Safety.

1. Safety is of utmost importance.
2. Constantly review and apply the 18 Situations that Shout Watchout and 10 Standard Fire Orders.
3. Be particularly cautious with:
a. Burning snags you allow to burn down.
b. Burning or partially burning live and dead trees.
c. Unburned fuel between you and the fire.
d. Identify hazard trees with either an observer flagging and/or glow-sticks.
4. Be constantly aware of the surroundings, of expected fire behavior, and possible fire perimeter one or two days hence.

Fire Lining Phase.

1. Select procedures, tools, and equipment that least impact the environment.
2. Give serious consideration to use of water as a firelining tactic (fireline constructed with nozzle pressure, wetlining).
3. In light fuels, consider:
a. Cold trail line.
b. Allow fire to burn to natural barrier
c. Consider burn out and use of "gunny" sack or swatter.
d. Constantly re-check cold-trailed fireline.
e. If constructed fireline is necessary, use minimum width and depth to check fire spread.
4. In medium/heavy fuels, consider:
a. Use of natural barriers and cold trailing.
b. Cooling with dirt and water, and cold-trailing.
c. If constructed fireline is necessary, use minimum width and depth to check fire spread.
d. Minimize bucking to establish fireline; preferably build line around logs.
5. Aerial fuels--brush, trees, and snags:
a. Adjacent to fireline; limb only enough to prevent additional fire spread.
b. Inside fireline; remove or limb only those fuels which if ignited would have potential to spread fire outside the fireline.
c. Brush or small trees that are necessary to cut during fireline construction will be cut flush with the ground.
6. Trees, burned trees, and snags:
a. MINIMIZE cutting of trees, burned trees, and snags.
b. Live trees will not be cut; unless determined they will cause fire spread across the fireline or seriously endangers workers. If tree cutting occurs cut stumps flush with the ground.
c. Scrape around tree bases near fireline if hot and likely to cause fire spread.

d. Identify hazard trees with either an observer, flagging and/or glow sticks.
7. When using indirect attack:
a. Do not fall snags on the intended unburned side of the constructed fireline, unless they are an obvious safety hazard to crews working in the vicinity.
b. On the intended burnout side of the line, fall only those snags that would reach the fireline should they burn and fall over.
Consider alternative means to falling, i.e. fireline explosives, bucket drops.

Mop-up Phase.

1. Consider using "hot-spot" detection devices along perimeter (aerial or hand-held).
2. Light fuels:
a. Cold-trail areas adjacent to unburned fuels.
b. Do minimal spading; restrict spading to hot areas near fireline only.
3. Medium and heavy fuels:
a. Cold-trail charred logs near fireline; do minimal scraping or tool scaring.
b. Minimize bucking of logs to check for hot spots or extinguish fire; preferably roll the logs.
c. Return logs to original position after checking or ground is cool.
d. Refrain from making bone-yards; burned/partially burned fuels that were moved would be arranged in natural position as much as possible.
e. Consider allowing larger logs near the fireline to burnout instead of bucking into manageable lengths. Use lever, etc. to move large logs.
4. Aerial fuels--brush, small trees and limbs; remove or limb only those fuels which if ignited have potential to spread fire outside the fireline.
5. Burning trees and snags:
a. First consideration is allow burning tree/snag to burn themselves out or down (Ensure adequate safety measures are communicated).
b. Identify hazard trees with either an observer, flagging, and/or glow-sticks.
c. If burning trees/snag pose serious threat of spreading firebrands, extinguish fire with water or dirt. FELLING by chainsaw will be last means.
d. Consider falling by blasting, if available.

Camp Sites and Personal Conduct.

1. Use existing campsites if available.
2. If existing campsites are not available, select campsites that are unlikely to be observed by visitors/users.
3. Select impact-resistant sites such as rocky or sandy soil, or opening within heavy timber. Avoid camping in meadows, along streams or lakeshores.
4. Change camp location if ground vegetation in and around the camp shows signs of excessive use.
5. Do minimal disturbances to land in preparing bedding and campfire sites. Do not clear vegetation or do trenching to create bedding sites.
6. Toilet sites should be located in minimum of 200n feet from water sources. Holes should be dug 6-8 inches deep.
7. Select alternate travel routes between camp and fire if trail becomes excessive.

8. Evaluate coyote camps versus fixed campsites in sensitive areas.

Restoration of Fire Suppression Activities.

1. Firelines:
a. After fire spread is secured, fill in deep and wide firelines, and cut trenches.
b. Waterbar, as necessary, to prevent erosion, or use wood material to act as sediment dams.
c. Ensure stumps from cut trees/large size brush are cut flush with ground.
d. Camouflage cut stumps, if possible.
e. Any trees or large size brush cut during fireline construction should be scattered to appear natural.
2. Camps:
a. Restore campsite to natural conditions as much as possible.
b. Scatter fireplace rocks, charcoal from fire; cover fire ring with soil; blend area with natural cover.
c. Pack out all garbage and unburnables.
3. General:
a. Remove all signs of human activity (plastic flagging, small pieces of aluminum foil, litter).
b. Restore helicopter-landing sites.
c. Cover, fill in latrine sites.